CLAIMS:

1. A motion-compensated image signal interpolation unit (200) for generating an interpolated image intermediate a first and a second image, the interpolated image (102) being located at a first predetermined temporal distance (α) from the first image and being located at a second predetermined temporal distance ($1-\alpha$) from the second image, the interpolation unit (200) comprising:

- motion estimation means (202) for furnishing a first and a second motion vector relating to the first and second image;

- furnishing means (204, 206) for furnishing a first group of samples on basis of values of pixels of the first image and the first motion vector and for furnishing a second group of samples on basis of values of pixels of the second image and the second motion vector; and

- filtering means (212) for ordered statistical filtering of the samples of the first and the second group to produce a first value of a first pixel of the interpolated image (102), whereby a first quotient is substantially equal to a second quotient, the first quotient being determined by a first spatial distance (x_1) between a first one of the samples of the first group and a second one of the samples of the first group and the first predetermined temporal distance (α), the second quotient being determined by a second spatial distance (x_2) between a first one of the samples of the second group and a second one of the samples of the second group and the second predetermined temporal distance ($1-\alpha$).

2. A motion-compensated image signal interpolation unit (200) as claimed in claim 1, whereby the filtering means (212) include a median filter.

3. A motion-compensated image signal interpolation unit (200) as claimed in claim 2, whereby the filtering means (212) include a weighted median filter.

4. A motion-compensated image signal interpolation unit (200) as claimed in claim 3, whereby a particular weighting coefficient of the weighted median filter for weighting a particular sample of the first group of samples is higher than each of the further

weighting coefficients for weighting further respective samples of the first group of samples, the particular sample being located in the center of the first group of samples.

5. A motion-compensated image signal interpolation unit (200) as claimed in claim 4, whereby the particular weighting coefficient is higher than a sum of the further weighting coefficients.

6. A motion-compensated image signal interpolation unit (200) as claimed in claim 1, whereby a second value corresponding to the first one of the samples of the first group equals a third value of a third one of the pixels of the first image.

7. A motion-compensated image signal interpolation unit (200) as claimed in claim 1, whereby a second value corresponding to the first one of the samples of the first group is computed by means of interpolation of a third value of a third one of the pixels of the first image and a fourth value of a fourth one of the pixels of the first image in a spatial environment of the third one of the pixels.

8. A motion-compensated image signal interpolation unit (200) as claimed in claim 1, whereby a direction of a line segment, connecting the first one of the samples of the first group and the second one of the samples of the first group, corresponds with the first motion vector.

9. A motion-compensated image signal interpolation unit (200) as claimed in claim 1, whereby a direction of a line segment, connecting the first one of the samples of the first group and the second one of the samples of the first group, corresponds with a difference vector, the difference vector corresponding to a difference between the first motion vector and a third motion vector in a spatial environment of the first motion vector.

10. A motion-compensated image signal interpolation unit (200) as claimed in claim 1, further comprising edge-detection means for detecting an orientation of an edge in the first image and whereby a direction of a line segment, connecting the first one of the samples of the first group and the second one of the samples of the first group, is orthogonal to the orientation of an edge.

11. An image processing apparatus (400) comprising:

- receiving means (402) for receiving an image signal representing a first and a second image; and

- a motion-compensated image signal interpolation unit (200) coupled to the receiving means, for generating an interpolated image (102) intermediate the first and the second image, the interpolated image (102) being located at a first predetermined temporal distance from the first image and being located at a second predetermined temporal distance from the second image, the interpolation unit (200) as claimed in claim 1.

12. An image processing apparatus as claimed in claim 11, further comprising a display device for displaying the interpolated image (102).

13. A method of generating an interpolated image (102) intermediate a first and a second image, the interpolated image (102) being located at a first predetermined temporal distance from the first image and being located at a second predetermined temporal distance from the second image, the method comprising:

- furnishing a first and a second motion vector relating to the first and second image;

- furnishing a first group of samples on basis of values of pixels of the first image and the first motion vector and for furnishing a second group of samples on basis of values of pixels of the second image and the second motion vector; and

- ordered statistical filtering of the samples of the first and the second group to produce a first value of a first pixel of the interpolated image (102), whereby a spatial distance between a first one of the samples of the first group and a second one of the samples of the first group is based on the predetermined temporal distance.

14. A computer program product to be loaded by a computer arrangement, comprising instructions to generate an interpolated image (102) intermediate a first and a second image, the interpolated image (102) being located at a first predetermined temporal distance from the first image and being located at a second predetermined temporal distance from the second image, the computer arrangement comprising processing means and a memory, the computer program product, after being loaded, providing said processing means with the capability to carry out:

- furnishing a first and a second motion vector relating to the first and second image;

- furnishing a first group of samples on basis of values of pixels of the first image and the first motion vector and for furnishing a second group of samples on basis of values of pixels of the second image and the second motion vector; and

- ordered statistical filtering of the samples of the first and the second group to produce a first value of a first pixel of the interpolated image (102), whereby a spatial distance between a first one of the samples of the first group and a second one of the samples of the first group is based on the predetermined temporal distance.